



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,828	09/30/2003	John K. Alex	POU920030132US1	6637

23334 7590 01/03/2008
FLEIT, KAIN, GIBBONS, GUTMAN, BONGINI
& BIANCO P.L.
ONE BOCA COMMERCE CENTER
551 NORTHWEST 77TH STREET, SUITE 111
BOCA RATON, FL 33487

EXAMINER

SHAW, PELING ANDY

ART UNIT	PAPER NUMBER
----------	--------------

2144

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

01/03/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptoboca@focusonip.com

Office Action Summary

Application No.

10/675,828

Applicant(s)

ALEX ET AL.

Examiner

Peling A. Shaw

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-12 and 14-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12 and 14-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Amendment received on 10/15/2007 has been entered into record. Claims 1-2, 4, 6-7, 9-12, 14-17 and 23-24 are amended. Claims 5 and 13 are cancelled. Claims 1-4, 6-12 and 14-24 are currently pending.
2. Preliminary amendment received on 03/17/2004 was entered into record. Claims 1, 9 and 18 were amended.

Priority

3. This application has no priority claim made. The filing date is 09/30/2003.

Claim Rejections - 35 USC § 112, first paragraph

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4, 6-12 and 14-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the original specification and claims in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- a. Independent claims 1, 9, 17 and 23-24 are amended with the limitations of “receiving, from a user, a desired end state associated with an autonomic computing system and a set of resource relationships associated with a set of resources for accomplishing the desired end state”, “for achieving a user-defined desired end state associated with the autonomic computing system based on a set of resource relationships received from a

user” and “based on the set of resource relationships received from the user and the implicit relationships that have been discovered” that are not specifically pointed out in the specification by the applicant. After a careful re-examination of applicant’s specification, examiner has found there are not sufficient support on these limitations. Claims 1, 9, 17, 23-24 and their dependent claims 2-4, 6-8, 10-12, 14-16, 18-22 are rejected under 35 U.S.C. 112, first paragraph. For the purpose of applying art, examiner will read the amended claim language in light of applicant’s specification, e.g. lines 13-19 on page 8, lines 8-18 on page 9, line 12 on page 17 to line 11 on page 18, line 13 on page 24 to line 13 on page 25 and line 1 on page 28 to line 12 on page 30, as “an administrator/user may enter end states for resources and the policy generator will be able to determine the desired end states and relationship among resources”.

- b. Claims 6 and 14 are amended to recite the limitation of “real-time harvesting ...” that is not found in applicant’s original specification or claim language. Claims 6 and 14 are rejected under 35 U.S.C. 112, first paragraph. For the purpose of applying art, the limitation is read as with the context of the limitation of “autonomic computing system”.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

Art Unit: 2144

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-12 and 14-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Wolff (US 6067545 A), hereinafter referred as Wolff.

- a. Regarding claim 1, Wolff disclosed a method comprising: receiving, from a user, a desired end state associated with an autonomic computing system (column 1, lines 56-59: clients make I/O requests directed to resources; column 6, lines 6-17: I/O requests for file or memory resource form clients; column 49, lines 54-65: command control for get/set configuration database; column 6, lines 38-42: looks up configuration database and direct I/O request; column 9, lines 26-32: I/O requests received from clients; column 16, lines 39-47: I/O request tagged with the source identifier; column 28, lines 11-15: configuration policy per configuration database; column 62, line 50-column 64, line 9: GUI for use to select and alternate) and a set of resource relationships associated with a set of resources for accomplishing the desired end state (column 23, lines 21-54: functional relationship of database, resource, node memory and file system; column 66, line 29-column 67, line 15: user/client display and control); discovering a set of implicit relationships associated with at least the set of resources (column 18, lines 22-48: named driver maps network namespace resources; column 55, lines 23-56: device driver is used in discovery process); determining, in response to the receiving, policy definitions for achieving the desired end state (column 49, lines 54-65: command control for get/set configuration database; column 6, lines 38-42: looks up configuration database and direct I/O

request; column 28, lines 11-15: configuration policy per configuration database) associated with the autonomic computing system based on the set of resource relationships received from the user and the implicit relationships that have been discovered (column 2, lines 37-41: pathway between resources; column 12, lines 55-67: resource and connection information); monitoring applicable resources for status information (column 11, lines 40-57: load-balance monitor; column 24, lines 31-50: load-balance monitor); determining if the autonomic computing system is at the desired end state (column 11, lines 40-53: determine if the current I/O utilization has exceeded the configured load-balance utilization threshold); and dynamically modifying resource states, by sending an instruction for at least one resource to perform an available action based on the policy definitions, in response to determining the autonomic computing system is not at the desired end state (column 13, lines 44-54: receiving a command to load-balance the aware-client from a node, redirect future I/O).

- b. Regarding claim 2, Wolff disclosed the method of claim 1, wherein the policy definitions can specify at least one of: an association between a resource and any other set of resources for achieving the desired end state (column 2, lines 37-41: pathway between resources; column 12, lines 55-67: resource and connection information); and a desired state for a resource or set of resources for achieving the desired end state (column 10, lines 13-23: state of servers or cluster file system nodes; column 27, line 66-column 28, line 15: master status with respect to the onset of resources balancing).

- c. Regarding claim 3, Wolff disclosed the method of claim 2, wherein the association between a resource and any other set of resources comprise at least one of: a start order among resources (column 6, line 47-column 7, line 4: allocation); a stop order among resources (column 10, lines 25-38: command to fail-back and fail-over); a prioritization between resources (claim 10: load balancing function prioritizing at least two attributes; column 8, lines 10-34: group priority); a conditional activation of policies (column 18, line 49-column 19, line 14: fail-over and fail back process); and a location limitation of resources (column 20, lines 46-59: group, domain and location).
- d. Regarding claim 4, Wolff disclosed the method of claim 1, further comprising: receiving resource status information from available resources; and continuing to determine if the autonomic computing system is at the desired end state and modifying the resource states, by sending an instruction for at least one resource to perform an available action based on the policy definitions, until the autonomic computing system has reached the desired end state (column 39, line 50-column 42, line 10: continue iteration for load balancing).
- e. Regarding claim 6, Wolff disclosed the method of claim 1, wherein the discovering a set of implicit relationships further comprises real-time harvesting implicit relationships between resources through self discovery (column 18, lines 22-48: named driver maps network namespace resources; column 55, lines 23-56: device driver is used in discovery process).

Art Unit: 2144

- f. Regarding claim 7, Wolff disclosed the method of claim 1, wherein the determining policy definitions for an autonomic computing system further comprises determining underlying relationships among members of a resource group defined by the user (column 20, line 15-column 21, line 9: group as per sales, accounting, engineering comprising broadly defined resources; claims 12, 21 and 29: resource group).
- g. Regarding claim 8, Wolff disclosed the method according to claim 7, wherein the members of the resource group are distributed within a heterogeneous cluster (claims 12, 21 and 29: storage devices and data sets; column 1, lines 38-50: heterogenous computing environment).
- h. Claims 9-12 and 14-16 are of the same scope as claims 1-4 and 6-8. These are rejected for the same reasons as for claims 1-4 and 6-8.
- i. Claims 17-22 and 24 are of the same scope as claims 1-2 and 6-8. These are rejected for the same reasons as for claims 1-2 and 6-8.
- j. Claim 23 is of the same scope as claims 1 and 8. It is rejected for the same reasons as for claims 1 and 8.

Wolff disclosed all limitations of claims 1-4, 6-12 and 14-24. Claims 1-4, 6-12 and 14-24 are rejected under 35 U.S.C. 102(b).

Response to Arguments

6. Applicant's arguments filed on 10/15/2007 have been fully considered, but they are not persuasive.
 - a. Applicant has amended the claim language substantially, particularly independent claims 1, 9, 17, 23-24 and dependent claims 6 and 14. Examiner has reviewed the amended claim changes in light of applicant's original specification and claim language. Examiner has further reviewed the claim rejections as per office action dated 05/14/2007 and applied prior art, i.e. Wolff with respect the current claim language. Examiner does further search on the amended claim language and finds that Wolff is still applicable to the current claim language. The claim rejections above reflected the amended claim changes and recited references from Wolff.
 - b. Applicant argues that Wolff merely teaches resource balancing and has nothing to do with "determining policy definitions for an autonomic computing system as per 1st paragraph on page 16 of current amendment. Applicant further argues that nowhere Wolff teaches or suggests that policy definitions are for achieving a desired end state that has been received from the user and nowhere does Wolff teach the policy definitions determined on based on the set of resource relationships received from the user and the implicit relationships that have been discovered as per last paragraph on page 16 of current amendment. Applicant continues asserting that Wolff has nothing to do with monitoring resources as per paragraph 3 on page 17 of current amendment and Wolff does not have other limitations of current claim 1 and 6 language as per

paragraph 4 on page 17 of current amendment through paragraph 2 on page 20 of current amendment.

- c. As examiner has carefully reviewed applicant's current claim language in light of applicant's original specification and claim language, especially with respect to the amended claim language, applicant's current arguments based upon applicant's amended claim language changes are reflected in the current claim rejections above. For applicant's other arguments, examiner does review applicant's current claimed invention, Wolff in general and particularly with respect to the applicant's current claim language another time. Examiner found Wolff does read upon applicant's claimed invention. As "resource" is used in general the current application and Wolff, I/O request is legacy terminology used with respect to the term usage of "resource". Applicant's broad terms of specifying "end state", determining and achieving "desired end state" in a cluster computing environment are abstraction of legacy "load specification", e.g. I/O request on resources, defining configuration database, and achieving load balancing configuration policy in a cluster file system nodes as per Wolff. Examiner does not see any specific difference in term of functionalities claimed by applicant from the recited functionalities of Wolff.
- d. It is the Examiner's position that Applicant has not submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in manner, which distinguishes over the prior art. As it is Applicant's right to claim as broadly as possible their invention, it is also the Examiner's right to interpret the claim language as broadly as possible. It is the Examiner's position that

the detailed functionality that allows for Applicant's invention to overcome the prior art used in the rejection, fails to differentiate in detail how these features of applicant's specification are unique (see item a in section a and items a and e in section 5). As it is well known in the art of network management system, resource requests addressed to a network system is load balanced based upon the resource requests and network system resources distribution and availability as per Wolff's disclosure that is read upon applicant's claimed invention. It is clear that Applicant must be able to submit claim language to distinguish over the prior arts used in the above rejection sections that discloses distinctive features of Applicant's claimed invention. It is suggested that Applicant compare the original specification and claim language with the cited prior art used in the rejection section above or the Remark section below to draw an amended claim set to further the prosecution.

- e. Failure for Applicant to narrow the definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant's intent to broaden claimed invention. Examiner interprets the claim language in a scope parallel to the Applicant in the response. Examiner reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

Remarks

7. The following pertaining arts are discovered and not used in this office action. Office reserves the right to use these arts in later actions.

- a. Henderson et al. (US 6058103 A) Network management system: condition
- b. Bishop et al. (US 6983317 B1) Enterprise management system
- c. Battou (US 20020174207 A1) Self-healing hierarchical network management system, and methods and apparatus therefor
- d. Nguyen et al. (US 20050027862 A1) System and methods of cooperatively load-balancing clustered servers (date is rather close)

Conclusion

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 2144

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

pas

pas

W. C. V. J.